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Washington, DC

February 28, 2003

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
c/o Vistronix, Inc.
236 Massachusetts Avenue, N.E.
Suite 110
Washington, DC 20002

By Courier
Re: ET Docket No. 02-135
Reply Comments of ScoreBoard, Inc.

Dear Ms. Dortch:

On behalf of our client, ScoreBoard, Inc., transmitted herewith are its Reply Comments in response to the Commission's above-referenced docket proceeding and request for Public Comment on its Spectrum Policy Task Force Report.

ScoreBoard, Inc.'s Reply Comments focus on the wireless environment, particularly the 2.4 GHz band and 802.11 issues, including the issue of the "commons" approach and "band manager" to wireless spectrum use.

Should you have any questions concerning these Reply Comments, please communicate directly with undersigned counsel.

Very truly yours,

/s/
John D. Pellegrin
Counsel for ScoreBoard, Inc.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Commission Seeks	)	
Public Comment on	)	ET Docket No. 02-135
Spectrum Policy Task Force	)	
Report	)	
	)	

Reply Comments of ScoreBoard, Inc.

ScoreBoard, Incorporated ("ScoreBoard") submits these Reply Comments addressing comments filed in response to the Commissions Public Notice[1] in the above referenced proceeding.

Introduction

In its Comments, ScoreBoard outlined efforts by the Commission that are necessary for certain devices operating in existing 2.4 GHz band unlicensed spectrum. These Comments focused on the problem with interference in the 2.4 GHz band that is caused by too many unlicensed devices operating within small geographical areas.

[1] Public Notice, FCC 02-322 (rel. November 25, 2002); Public Notice, DA 02-3400 (rel. December 11, 2002).

The large number of comments filed in this proceeding show the interest generated by the concepts discussed in the Spectrum Policy Task Force Report, and the appropriateness of spectrum policy reform. Additionally, a significant number of the comments concerned the use of unlicensed spectrum, both existing and future, and included further comments on regulatory changes needed in unlicensed spectrum.

Summary

In these Reply Comments, ScoreBoard focuses on the comments made concerning existing allocated unlicensed spectrum. ScoreBoard recognizes the importance of future allocations, however the critical nature of the problems facing existing spectrum use remains at the forefront of these discussions. Therefore, the focus here is on the comments addressing existing unlicensed allocations.

ScoreBoard presented and recommended a registration solution/regulatory approach for certain devices in unlicensed spectrum. ScoreBoard also commented on the "Commons" model for spectrum usage and the SPTF suggestion on use of the band manager concept. Several commenters made contributions in these areas, and ScoreBoard discusses those comments in greater detail.

Discussion

A. Registration Approach (and Protection), the "Commons" Model

In its comments, ScoreBoard proposed a registration method as part of a harmful interference mitigation process for unlicensed Wi-Fi Part 15 devices (802.11). This is necessary in order to ensure user quality of service and the continuation of reliable and consistent broadband connectivity.

Under the ScoreBoard proposal, the registration process for Wi-Fi base stations is simple but mandatory. Unregistered base stations would not be allowed to operate unfettered, or would not be entitled to protection, while registered base stations would have the right to optimized coexistence with other base stations. Such protection rights for registered Wi-Fi nodes may be the result of arbitration and settlement among registered users for specific geographical locations.

Several entities filing comments agree. PCIA, in discussing the use of unlicensed spectrum (and the 'Commons' model under discussion in the SPTF Report) states (*see* PCIA comments at page 5):

> When purchasing unlicensed devices, users should be required to register their devices with a frequency coordinator such as PCIA. Registration can be accomplished on line or by ordinary mail. The registration information should include the name, address and other contact information for the user, the make, model, serial number and FCC equipment registration number of

> the device, and the intended area of use of the device. Users should be required to update their address and other contact information and their intended area of use if it changes. Each of the frequency coordinators should keep a database of registrations and exchange such database information with the other competing frequency coordinators. Users who believe they are suffering interference problems or licensees who believe they are suffering interference problems from unlicensed devices operating in the licensee's band or adjacent bands can then go to a frequency coordinator as a first step in their efforts to identify the source of and resolve an interference problem.

ScoreBoard agrees with the PCIA in this regard. As outlined in its comments, ScoreBoard supports a simplified coordination process that is based upon a requirement by the Commission for registration. This registration provides a basis for protection rights, as asserted by Agere in its discussion of spectrum rights models (*see* Agere comments at ¶27) "…nor should the "Commons" model necessarily and inherently mean that there is no right to protection from interference". This necessary protection is the core of the ScoreBoard proposal for certain unlicensed devices: registration = minimal, yet critical **protection**.

Comsearch further lends its comments (*see* Comsearch comments at page 4) to support a registration process. However, SocreBoard believes that this process should apply to both existing and future unlicensed spectrum. As stated by Comsearch:

> One way to avoid and/or minimize interference concerns in future unlicensed spectrum is to implement an industry controlled device registration process. The registration could be performed via the internet

> and provide a quick and reliable assessment of the interference environment. Registrants would be granted interference protection on a first-come first-served basis. The process would also be applicable in shared bands where analysis against incumbent data and coordination would be required.

In supporting the Comsearch comments, ScoreBoard must disagree if Comsearch intends its approach apply only to future unlicensed spectrum. As discussed in the original ScoreBoard comments, this is a process for both existing and future responsible usage and regulatory oversight that quite appropriately fits into current unlicensed spectrum, in particular the 2.4 GHz band 802.11b device deployment and operation. Comsearch, much like PCIA, goes into further implementation detail on the registration process. Both propose that an Internet registration is possible. However this registration is accomplished, PCIA correctly scopes the necessary registration information. ScoreBoard supports the position of both Comsearch and PCIA that this is an industry controlled (but FCC mandated) process. Such a combined approach is most efficient and is a proven model that has worked in the past.

In addition, IEEE 802.18, in further discussion on the 'Commons' model, believes the Commission should go much further in its definition of this model. ScoreBoard also believes the statements of the IEEE requires Commission support. In its discussion on this model, the IEEE states that the 'Commons' model should not necessarily and inherently mean there is no right to protection

from interference (*see* IEEE comments at page 8). Some applications that have been developed in a sort of 'commons' under the Commission's Part 15 Rules have become so valuable and relied on in critical situations for society that consideration should be given to affording them some reasonable measure of protection from harmful interference. In effect, ScoreBoard urges that the Commission consider providing sufficient flexibility in its policies for more than one type of 'commons'. At least some of these 'commons' should, to the maximum degree possible, not be encumbered with licensed users with higher regulatory status, and therefore the ability to "shut down" the users of the 'commons'. Once again, the fundamental change proposed is a regulatory right to protection from harmful interference. ScoreBoard, as in its comments, believes this is a new fundamental for unlicensed device operation that must be seriously considered by the Commission. ScoreBoard continues to support the position and the comments of the IEEE 802.18 group in that more than one definition of 'commons' may exist.

This support for a registration process and unlicensed device protection is particularly noteworthy. ScoreBoard believes that the time is right for the Commission to take meaningful action with respect to use of existing unlicensed spectrum, in particular at 2.4 GHz, and these industry recommendations for a simple regulatory solution for existing and future spectrum usage. Present and

future Wi-Fi users need such regulations in order to adequately protect this widespread public service.

The importance of this regulatory oversight to promote as well as maintain stability in the present wireless environment is underscored by the attached February 27, 2003 article in The Wall Street Journal. The WSJ reports and quotes executives of large hotels and hotel chains that wireless access for its business guests in particular has now become absolutely critical.

B. Band Manager

The PCIA, in its comments (*see* PCIA comments at page 4),

> …supports the establishment of a "best practices" handbook to be used in the resolution of interference problems, but urges the Commission to include a discussion of the role that frequency coordinators such as PCIA can play in the mediation of interference problems. In addition, PCIA suggests that users of unlicensed devices be required to register their devices with a frequency coordinator such as PCIA, and that the frequency coordinators maintain data bases that they share with each other so that users can be identified when sources of harmful interference are investigated.

ScoreBoard supports this position of the PCIA. Indeed, in its comments, ScoreBoard advocates the adoption of the SPTF that frequency coordinators (or band managers) be authorized to manage certain spectrum.

However, in regard to the Band Manager concept, ScoreBoard disagrees in part with the comments filed by Microsoft. In its comments, Microsoft states that

the band manager concept is inappropriate for the unlicensed bands (see Microsoft comments at page 10). Rather, as ScoreBoard suggested in its Comments, the unlicensed bands are perfect for a management concept using the Band Manager concept. ScoreBoard does agree with those comments made by Microsoft concerning the band manager charging users for the right to use the unlicensed spectrum. As stated by Microsoft, this should not be allowed.

The band manger concept and the registration concept will work well together. Refinement of these ideas is required before either should be rejected. An extension of the existing Part 15 requirements for Wi-Fi 802.11b devices operating at 2.4 GHz should be adopted. This extension is a simplified coordination requirement for Wi-Fi base stations, supported by a location-specific registration process. By virtue of location registration, 802.11b Wi-Fi base stations are given a level of interference protection from other Wi-Fi base stations. Under this regulatory change, registration equals minimally necessary protection. The registration process for Wi-Fi base stations should be simple but mandatory. Unregistered base stations would not be allowed to operate unfettered, while registered base stations would have the right to optimised coexistence with other base stations. Such protection rights may be the result of arbitration and settlement among registered users for a geographical location. A band manager could effectively manage this type of registration process for Wi-Fi base stations.

Conclusion

ScoreBoard believes the SPTF Report is a watershed for the further and rapid development, deployment, and refinement of broadband wireless access for the public. ScoreBoard continues to believe, as do many of the commenters, that further mandatory regulatory provisions and guidelines are absolutely necessary to assure continued quality of service and maximizing efficiency in use and expansion of unlicensed devices. Therefore, in conjunction with this filing, ScoreBoard is preparing a formal *Petition for Rulemaking* which proposes an extension of Part 15 to include a simplified coordination requirement for Wi-Fi base stations, supported by a location-specific registration process. By virtue of location registration, Wi-Fi base stations will be given a level of critical and

absolutely necessary interference protection from other Wi-Fi base stations.

Respectfully submitted this 28th day of February, 2003

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Certificate of Service

I, John D. Pellegrin, hereby certify that on this 28th day of February 2003, I caused to be filed and served electronically and by first-class mail (postage prepaid), copies of the foregoing ScoreBoard, Inc. Reply Comments in response to *Commission Seeks Public Comment on Spectrum Policy Task Force Report* (ET Docket No. 02-135):

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Wi-Fi Is Now a Must for Big Hotels

Marriott International, Intel Agree to Promote Fast Wireless Access to Web

By Christina Binkley And Don Clark

Hotels are racing to promote high-speed wireless Internet technology as a way to lure increasingly elusive business travelers. It is unclear how many road warriors will quickly use the technology, but making it available has suddenly become a must for major hotels.

Marriott International Inc. and Intel Corp. are expected today to announce a joint marketing campaign to promote an increasingly popular wireless Internet technology known as Wi-Fi at 400 Marriott, Renaissance, Courtyard, Residence Inn and other hotels.

Marriott, based in Washington, D.C., said in December that it would outfit hotels with wireless technology. The Intel agreement will help the hotelier to more heavily promote itself in the intensive competitive and sagging travel economy. "Customers are making decisions about where they stay based on where this technology is available," says Lou Paladeau, a Marriott vice president in charge of technology development. "If you don't have it, you're not getting them in the door."

Marriott's agreement with Intel includes advertising and direct-mail promotions, as well as the placement of signs around the hotels identifying "hot spots," or zones where the wireless technology is available—lobbies, meeting rooms and other public places. Guests who have installed wireless cards in their laptops must pay $2.95 for the first 15 minutes for the service, and 25 cents a minute thereafter. The service will be provided by STSN Inc., a company in which Marriott and Intel own interests. Intel declined to comment prior to making the public announcement.

Starwood Hotels & Resorts Worldwide Inc., White Plains, N.Y., announced a similar marketing agreement with Intel for 150 Westin, Sheraton and W hotels on Feb. 12—a week after Omni Hotels Irving, Texas, launched its own initiative, calling itself "the first luxury hotel brand in the U.S." to offer high-speed wireless Internet access in guest rooms.

Overseas, the technology has been available longer, particularly in Asia. For instance, seven Shangri-La hotels in Singapore, Hong Kong, Beijing and elsewhere offer the service in guest rooms, restaurants and even beside some swimming pools. "Our Asian guests in particular are early adopters of new technology," says a spokeswoman for Shangri-La Hotels & Resorts, Hong Kong. The service is also appearing in airports around the world.

> 'Customers are making decisions about where they stay based on where this technology is available,' a Marriott executive said. 'If you don't have it, you're not getting them in the door.'

For Intel, the Marriott and Starwood deals are part of the buildup to the March 12 launch of Centrino, a package of wireless-chip technologies that is shaping up as one of Intel's biggest marketing pushes in years. The company, which sells the microprocessors that serve as the brains of most personal computers, sees Wi-Fi technology as an important driver of future demand for notebook PCs. Setting up networks of wireless-access points—such as those in hotels—is an important first step.

Centrino, a new brand that Intel intends to market heavily, includes a microprocessor and two other kinds of communications chips that are expected to be building blocks for smaller, lighter laptop machines that come with built-in circuitry for connecting to wireless networks.

Marriott estimates 10% of its guest have Wi-Fi capability. About 19% of laptop computers sold last year came with circuitry for Wi-Fi communications, according to the market research firm International Data Corp., which expects that percentage to grow to reach 91% by 2006.

In addition to persuading hardware makers to use the Centrino technology, Intel has been making a series of investments to build the Wi-Fi market. In October, it set up a fund to invest $150 million in companies developing Wi-Fi technology. More recently, Intel worked with companies that include AT&T Corp. and International Business Machines Corp. to form Cometa Networks, a start-up that plans to set up a wireless-access network